Gould Wash Bridge
Spanning Gould Wash at State Route 9
Hurricane City vicinity
Washington County
Utah

HAER No. UT-69

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
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HISTORIC AMERICAN ENGINEERING RECORD
GOULD WASH BRIDGE

I. INTRODUCTION

Location:	Spanning a portion of Gould Wash on SR-9, Hurricane vicinity, Washington County, Utah.
Quadrangle:	Hurricane, Utah (1986)
UTM:	12/294620mE/4117250mN
Date of Construction:	1937
Present Owner:	State of Utah
Present Use:	Vehicular bridge; to be replaced by a newer structure within two years.
Significance:	The Gould Wash Bridge, built by W.W. Clyde and Company of Springville, Utah under the supervision of George Adams, represents a good example of reinforced concrete T-beam bridge construction typical of this era. It is also the largest bridge to have been built on the road between Hurricane and St. George (Berry Springs Road).
Historian:	Michael R. Polk, Sagebrush Archaeological Consultants, Ogden, Utah. September 1993.
Photographer:	Michael R. Polk, Sagebrush Archaeological Consultants, Ogden, Utah. March 1993.

II. HISTORY

A. Need For Bridge

The European-American settlement of the southwestern part of Utah followed well behind that of the Wasatch Front in the northern part of present-day Utah. The first major settlement was begun by Mormon immigrants in 1847 in the area of present-day Salt Lake City. Southern Utah was settled later, in part due to its distance from the Wasatch Front, but also because of its rugged and inhospitable nature. Much of the area is dissected by deep canyons and high mountains and plateaus which tended to discourage both early settlement and the development of transportation routes through the area.

Several factors led to the early settlement of this portion of southern Utah in the early 1850s. Its relatively warm climate, agricultural potential and geographic position on the early wagon route from Salt Lake City to southern California were significant. This helped it fit favorably into the Mormon Church plan of quickly colonizing areas of the Great Basin beyond Salt Lake City. The first settlement in the area was that of New Harmony which is located approximately 20 miles north of Hurricane. New Harmony was founded in 1852.[1] As other towns such as Toquerville, Virgin City, St. George and Washington City were established during the late 1850s and early 1860s, transportation routes were established between them following natural waterways and canyons and avoiding major topographic obstacles. The Virgin River was the principal waterway in the area which was followed most closely and which is also the most prominent and important river in southwestern Utah. It was along this river that many of the early towns were established and where virtually all of the agricultural development took place.

By the mid-1890s settlers coming into extreme southwestern Utah had occupied most of the available lands along the banks of the Virgin River. Periodic and unpredictable flooding of the river destroyed much of the agricultural land along the river banks. The flooding destroyed dams along the river six times between 1857 and 1859.[2] The uncertainty of the river and the limited land available for new agriculture prompted people to look elsewhere for land to cultivate. Residents of southwestern Utah in search of this land believed that they had found it on Hurricane Bench where soil appeared fertile, but in need of water. Several of them formed a canal company in 1893 and began construction of a large aqueduct to bring Virgin River water from upstream to Hurricane Bench. It took eleven years and a sizeable infusion of money from the Mormon Church, but the canal was completed in 1904.[3] With the introduction of agriculture on the Hurricane Bench, the town steadily grew during the early years of the twentieth century attracting a population of 100 families, by 1917. During this growth period the main transportation routes of the area continued to bypass the town. Though a wagon road already existed across Hurricane Bench, extending west to east from St. George to Rockville, the main route of travel east-west through the area was north of Hurricane through Toquerville.[4] That was the best road for traffic from St. George and other towns along the Territorial Road which extended from St. George northward to Salt Lake City.

The economic growth which occurred in Utah and the nation as a whole during the 1910s and 1920s, coupled with the increasing numbers of automobiles present on the nation's roads during this time, encouraged more tourism in southwestern Utah, especially in nearby Zion National Monument. The monument was created in 1909 by Presidential proclamation and by 1919 had become a national park. The most direct route between St. George and the park was through Hurricane, known as the Berry Springs Road and, later, the Hurricane cut-off road.[5] However, the increasing traffic and potential tourist income continued to be diverted to the north through Toquerville and LaVerkin because of the poor conditions on the road through Hurricane. Hurricane City leaders, concerned about the loss of potential economic benefits to the town, appealed to the State Road Commission and were eventually rewarded with the upgrading of a portion of the Berry Springs Road in 1933.[6] Though the project included road grading and construction of a bridge across the Virgin River west of Hurricane, it left over five miles of poor road between there and the town. In 1935, some upgrading was done on that section making it passable for local traffic. Despite this work, however, automobile clubs and other bureaus remained reluctant to route tourist traffic over the road because it still had a poorer surface than the paved road through Toquerville. Finally, in late 1936, a contract was let by the State Road Commission to finish upgrading the last 5.573 miles of the Berry Springs Road to a gravel surface (to become part of State Road No. 17). As part of this construction project, a second contract was let for construction of a steel reinforced concrete bridge over Gould Wash located just west of Hurricane.[7] The contract was to construct a "...65 ft. span Concrete Ribbed Rigid Frame bridge..." as part of Federal Aid Project No. 113-D, the road construction project between the Virgin River and Hurricane.[8]

B. Bridge Construction History

The contract for the Berry Springs Road, part of the Federal Aid Program, was awarded to W.W. Clyde in late 1936 by the State Road Commission based upon plans and specifications provided by State Road Commission Engineers. Construction began in early 1937 under the supervision of State Road Commission engineer Stewart Knowlton.[9] The work, which was to have begun on January 4, was delayed for several weeks by adverse weather and road conditions which prevented the transportation of the heavy machinery necessary for road building.[10]

Early in the construction of the Berry Springs Road, an obstacle was encountered which greatly slowed construction progress. A large watercourse, known as Gould Wash, lay along the road over which it was necessary to construct a bridge. On January 28, the State Road Commission published a Notice To Contractors in the *Washington County News*[11] requesting bids for construction of a 65 foot span concrete ribbed rigid frame bridge over the wash. The contract for the bridge was eventually awarded to W.W. Clyde and Company of Springville for a cost of $15,257.02 as Federal Aid Project No. 113-D.[12] The company began construction on the bridge on February 18, 1937.[13] The construction of the bridge was completed three months later, on May 22, under the supervision of George Adams.[14] With its completion, the Gould Wash Bridge became the largest bridge built along the Berry Springs Road.

During the same year that the Gould Wash Bridge was built, construction was already underway, three miles to the east, on a massive steel arch bridge on State Route 9 where it crosses the Virgin River at LaVerkin. The bridge, costing $240,000 and representing one of the largest one span bridges ever built in Utah, had become a necessity due to the constant washing out of the main levee and dirt road east to Zion National Park. The bridge contract was awarded to the Christensen and Gardner Company of Salt Lake City and the work, begun in early 1937, was completed in late October of the same year.[15] A large dedication ceremony attracted 2000 local citizens on October 15, prior to the actual completion of the bridge.[16] The construction of the Gould Wash Bridge, which had been finished five months earlier, was overshadowed by the excitement about and the enormity of the impending completion of the new Hurricane-LaVerkin Bridge project.

III. THE BRIDGE

A. Description

The fifty-six year old bridge on State Route 9 is oriented east-west at a skew spanning the course of the northward flowing Gould Wash channel. As designed and represented in six sheets of construction drawings prepared by "JAU." of the Utah Road Commission in 1937, Gould Wash Bridge is a one span, steel reinforced, poured concrete T-Beam structure, parallelogram-shaped in plan, and measuring 72 feet long by 26 feet wide.[17] The parapets extend the length of the entire structure to 118 feet and are 2 feet 7½ inches high.

The bridge's single span measures 65 feet 4 inches in width between two short five-foot wide concrete abutments. The west abutment adjoins a revetment which extends back into the embankment a distance of 27 feet. The east abutment also adjoins a revetment which extends 25 feet 1 inch into the embankment. The bridge's horizontal superstructure consists of three arched T-beams extending the length of the span from abutment to abutment.

The bridge has a deck or vehicle driving surface of concrete topped with bituminous pavement. The original surface has been resurfaced with asphalt over the years. Along the north and south sides of the bridge are concrete railings. The steel-reinforced railings consist of five-foot wide concrete "posts" at each end and over each abutment, with lengths of round-arched balusters in between. Above the balusters is a wide concrete rail and below a chamfered concrete curb. All concrete is smooth-finished.

Although built in 1937, the bridge, especially its superstructure, is quite modern in appearance. The recessed textured geometric panels in the abutments and railing posts and the incised lines in the revetments reveal an Art Deco stylistic influence, a style which was at the height of its popularity during this time period. Interestingly, these decorative features were placed on the Road Commission drawings to be made part of the structure. Such detailing is shared by few Utah bridges built during this time. Most bridges constructed during this era were rather plain, poured concrete structures.

Overall, the bridge is nicely proportioned and representative of fine concrete bridge design of its era. The superstructure is in quite good condition. The railings are deteriorated in a few places with the reinforcing steel exposed. The only additions to the bridge are steel safety railings which have been attached to the ends of the concrete railings to extend the bridge approaches.

B. Ownership and Future

Both Utah State and the U.S. Government paid for the Gould Wash Bridge to be built and the bridge has remained a part of the State Road system since that time. The bridge's traffic volume has constantly increased over the years, especially with the increased traffic flow to Utah's many national parks, especially Zion and Bryce Canyons. As such, the bridge has become functionally obsolete largely because it is too narrow. It is scheduled to be replaced within the next two years.

IV. BRIDGE BIOGRAPHICAL MATERIAL

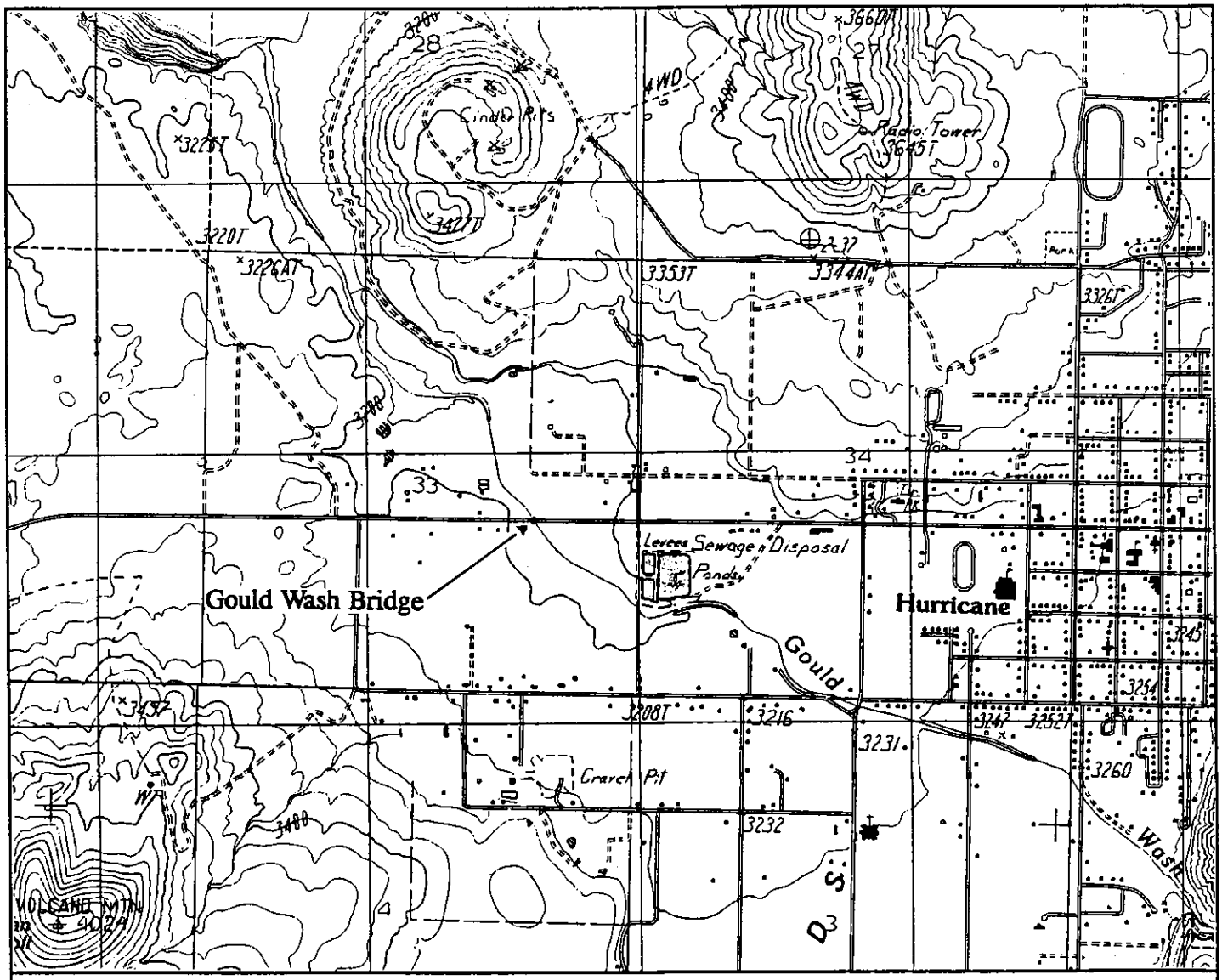
A. Engineering and Design

The design for the Gould Wash Bridge was a product of the Utah State Road Commission. The original design plans list J.A.U. (initials only) as the designer of the bridge.[18] Nothing is known of this person who was, presumably, a Utah State Road Commission engineer.

B. Bridge Builder

The Gould Wash Bridge was built by the W.W. Clyde and Company contract firm of Springville, Utah. This company was begun as a partnership in 1927 and incorporated in 1933.[19] The initial partnership consisted of Wilford W. Clyde holding 50 percent interest, Edward Clyde (his brother) with 25 percent interest, and Guy Mendenhall with 25 percent. Mr. Mendenhall's interest was later purchased by W.W. Clyde.[20] Since that time the business has remained in the family and is currently run by the third generation of Clydes.[21] In 1972 there were nine Clydes working full-time for the firm, primarily at the management level.[22]

At the time of Wilford W. Clyde's death on August 1, 1976 the construction firm had completed more than $350 million in contracts in Utah, Arizona, Idaho, Nevada and Wyoming, making it a major highway builder in Utah and surrounding states.[23] The W.W. Clyde Construction Company has also built a number of dams, the Willard Bay dike, the Huntington Power plant, and joined other firms in constructing large buildings such as the LDS Office Building and the ZCMI Center, both in Salt Lake City.[24] The company has also constructed long sections of road in Utah, including much of the Interstate highway system.



Location of Gould Wash Bridge on SR-9, Hurricane, Utah. Taken from: USGS 7.5' Quadrangle Hurricane, Utah (Provisional Edition 1986).

V. ENDNOTES

1. John Taylor Woodbury, *Vermilion Cliffs: Reminiscences of Utah's Dixie,* manuscript on file: Special Collections, Washington County Library, St. George, Utah, 1933, p. 143. Published by the Woodbury Children in Commemoration of Their Parents' Golden Wedding.

2. Andrew Karl Larsen, *Irrigation and Agriculture in Washington County.* St. George, Utah, Work Projects Administration, 1950, p. 7.

3. Davis, William E., *A Historical Survey of Utah Department of Transportation's State Route 9 Corridor between Mile Post 7.75 and 9.5, Washington County, Utah.* Bluff, Utah: Abajo Archaeology, Archaeological Report, April 1992, p. 5.

4. Alice Gubler Stratton, *The Story of The Hurricane Canal,* manuscript on file at the Special Collections Department, Southern Utah University, Cedar City, Utah, 1969.

5. The Berry Springs Road was originally designated as part of State Route 17 when road construction and upgrading was completed in 1937 (*Washington County News*, 19 November 1936, p. 4, col. 2). In 1969, the State Legislature redesignated it State Route 15 and on May 20, 1977 the Legislature changed it to State Route 9, the number it has retained to the present day (John Monson, personal communication 1993).

6. *Washington County News,* 19 November 1936, p. 1, col. 1.

7. Ibid., 28 January 1937, p. 8, col. 3.

8. Ibid.

9. Ibid., 7 January 1937, p. 2, col. 1.

10. Ibid.

11. Ibid., 28 January 1937, p. 8, col. 3.

12. Utah State Road Commission, *Biennial Report 1937-1938,* 1938, p. 38.

13. Ibid.; *Washington County News,* 18 February 1937, p. 4, col. 3.

14. Utah State Road Commission, *Biennial Report 1937-1938,* 1938, p. 38; *Washington County News,* 27 May 1937, p. 4, col. 1.

15. *Washington County News*, 14 October 1937, p. 1, col. 7.

16. Ibid., 21 October 1937, p. 1, col. 1.

17. Utah State Road Commission, *Biennial Report 1937-1938,* 1938.

18. Ibid.

19. Arnold Irvine, *Deseret News,* "Clyde Keeps an Eye on Roads He Built", 25 August 1973.

20. Associated General Contractors of America, Early Day Recollections, *Building a Better Utah for 50 Years,* 1972, p. 44.

21. Norman Clyde, personal communication, 13 October 1993. [This was a telephone conversation between Ann S. Polk of Sagebrush and Mr. Clyde who is a principal in the W.W. Clyde Construction Corporation and grandson of W.W. Clyde, the founder of the company.]

22. Associated General Contractors of America, Early Day Recollections, *Building a Better Utah for 50 Years,* 1972, p. 45.

23. *Deseret News,* "W.W. Clyde builder, dies", 2 August 1976, p. 12B; *Salt Lake Tribune,* 3 August 1976.

24. Arnold Irvine, *Deseret News,* "Clyde Keeps an Eye on Roads He Built", 25 August 1973.

VI. REFERENCES CITED

A. Books and Published Sources

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B. Newspapers

Deseret News. "W.W. Clyde builder, dies", 2 August 1976, p. 12B.

---------. "Clyde Keeps an Eye on Roads He Built", 25 August 1973.

Salt Lake Tribune. "Contractor Dies, W.W. Clyde, 86", 3 August 1976.

Washington County News. St. George, Utah.

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---------. 7 January 1937, p. 2, col. 1.

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---------. 27 May 1937, p. 4, col. 1.

---------. 14 October 1937, p. 1, col. 7.

---------. 21 October 1937, p. 1, cols. 1 and 2.

C. Documents and Reports

Davis, William E. *A Historical Survey of Utah Department of Transportation's State Route 9 Corridor between Mile Post 7.75 and 9.5, Washington County, Utah.* Bluff, Utah: Abajo Archaeology, Archaeological Report, April 1992.

Utah State Road Commission. *Biennial Report 1937-1938.*

D. Personal Communications

Clyde, Norman. Personal communication, 1993. [This was a telephone conversation between Norman Clyde who is a principal in the W.W. Clyde Construction Corporation and grandson of W.W. Clyde, the founder of the company and Ann S. Polk of Sagebrush Archaeological Consultants.]

Monson, John. Personal communication, 1993. [This was a telephone conversation on December 7, 1993 between John Monson, Planning Section, Utah Department of Transportation, Salt Lake City and Michael R. Polk of Sagebrush Archaeological Consultants.

E. Maps and Drawings

Utah State Road Commission. "Gould Wash - Washington County", prepared by J.A.U. Six drawings, Utah State Road Commission, Salt Lake City, Utah.